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ABSTRACT

The National Center on Educational Outcomes (NCEO) has been working with federal and state agencies to facilitate and enhance the collection and use of data on educational outcomes for students with disabilities. The purpose of this document is to present a model of: (1) early childhood outcomes at age 3, where outcomes are defined as the results of learning experiences or interactions between children and the educational process; and (2) possible indicators of these outcomes for all 3-year-old children (whether identified as having disabilities or not), where indicators are defined as numbers or other symbolic representations that can be used to determine whether desired outcomes are achieved. In the model, educational resources (inputs and contexts) influence learning opportunity and process. These in turn, influence the outcome domains, which have a return influence on both the resources and the opportunity/process. Outcome domains include physical health, responsibility and independence, contribution and citizenship, academic and functional literacy, personal and social adjustment, satisfaction, presence and participation, and family involvement/accommodation and adaptation. The model is extended by identifying outcomes, indicators of the outcomes, and finally, sources of data for the indicators. The model includes children with disabilities or developmental delays as well as all 3-year-old children in educational and day care programs. (JDD)

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Educational Outcomes and Indicators for Early Childhood (Age 3)

EC 303323

NATIONAL CENTER ON EDUCAT. NAL OUTCOMES

The College of Education
UNIVERSITY OF MINNESOTA

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August, 1993

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The National Center on Educational Outcomes (NCEO) was established in October, 1990, to work with state departments of education, national policy-making groups, and others to facilitate and enrich the development and use of indicators of educational outcomes for students with disabilities. It is believed that responsible use of such indicators will enable students with disabilities to achieve better results from their educational experiences. The Center represents a collaborative effort of the University of Minnesota, the National Association of State Directors of Special Education, and St. Cloud State University.

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Educational Outcomes and Indicators for Early Childhood (Age 3)

The current emphasis on educational reform and accountability reflects the public's desire to know the results of education for all of America's students. There is great interest in identifying the important outcomes of education and the best indicators of those outcomes.

The **National Center on Educational Outcomes** (NCEO) is working with federal and state agencies to facilitate and enhance the collection and use of data on educational outcomes for students with disabilities. In doing so, it has taken an inclusive approach, identifying a conceptual model of outcomes that applies to all students, not just to students with disabilities. Hundreds of educators, administrators, policymakers, and parents have participated in a consensus-building process using this model as a framework to identify key indicators of important educational outcomes for all students.

The purpose of this document is to present the model of early childhood outcomes at age 3 and the indicators of these outcomes for all children. This includes children identified as having disabilities or developmental delays (or being at risk for developing them) as well as all 3-year-old children in educational and day-care programs. Age appropriateness for 3-year-olds is assumed for all outcomes and indicators in this document. When age-appropriateness is mentioned, it is to give special emphasis to its importance.

In the pages that follow, you will find:

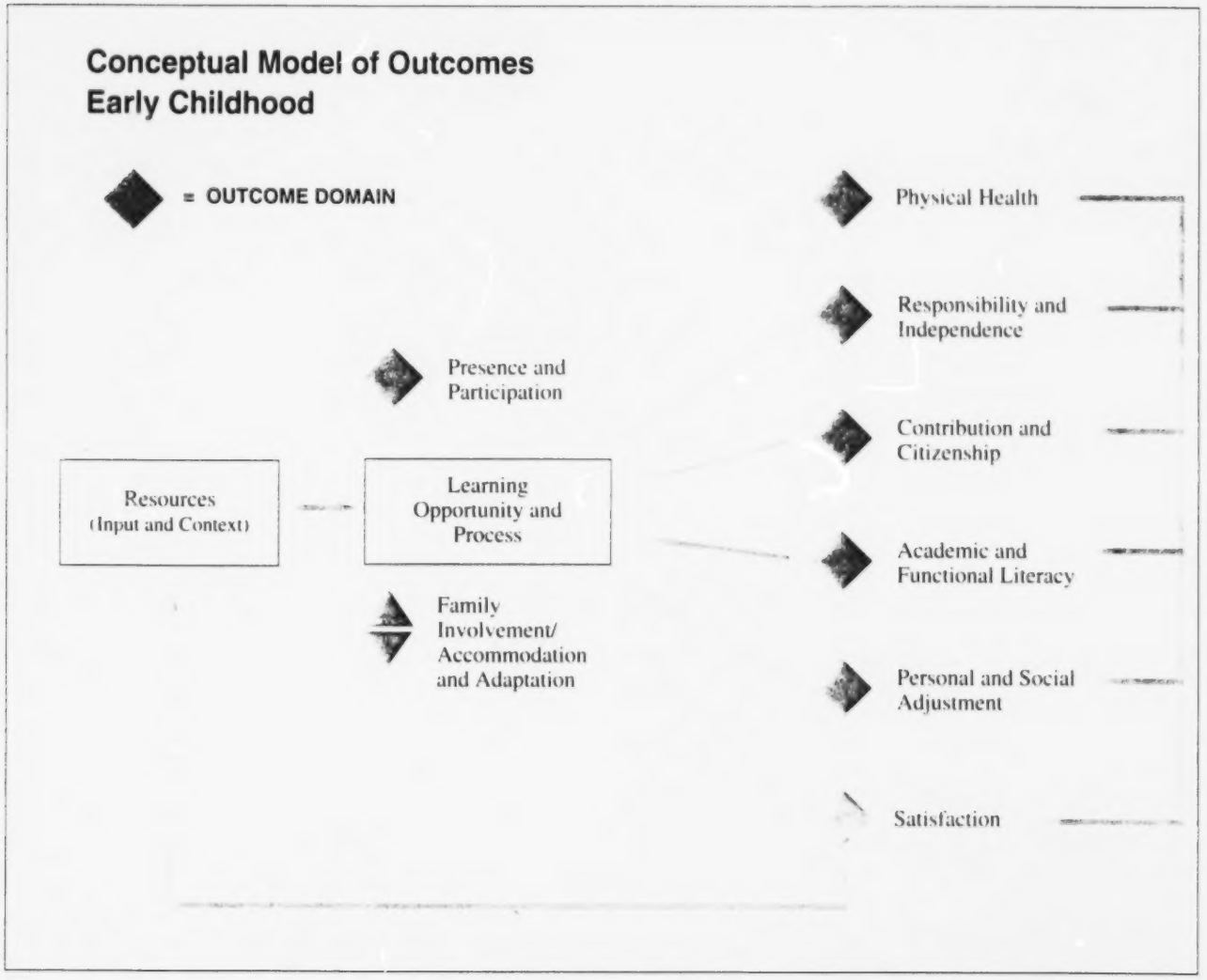
- A conceptual model of domains and outcomes
- Possible indicators for each outcome
- Steps toward identifying sources of data for indicators

We at the National Center on Educational Outcomes are indebted to many groups and individuals who provided feedback to us (see Contributors listed at the end of this document). We believe that the model and indicators for early childhood outcomes presented here will serve as a point from which to extend discussion as policymakers, states, and local school districts identify the important outcomes of education.

Conceptual Model of Domains and Outcomes

The conceptual model depicted below shows the complete educational model, with Educational Resources (Inputs and Contexts) influencing Learning Opportunity and Process. These in turn, influence the Outcome Domains (the shaded areas), which have a return influence on both the resources and opportunity/ process.

Two of the shaded domains, Presence and Participation, and Family Involvement/Accommodation and Adaptation, are placed next to Learning Opportunity and Process. This placement results from the belief that these domains may be part of the process, but still need to be measured. All domains (indicated by ◆) are treated equally as outcome domains. **Family Involvement is added to Accommodation and Adaptation in the conceptual model at the early childhood level. This reflects an increased need to focus on outcomes related to the involvement and support of the family and community.**



The conceptual model is extended by identifying outcomes, indicators of the outcomes, and finally, sources of data for the indicators.

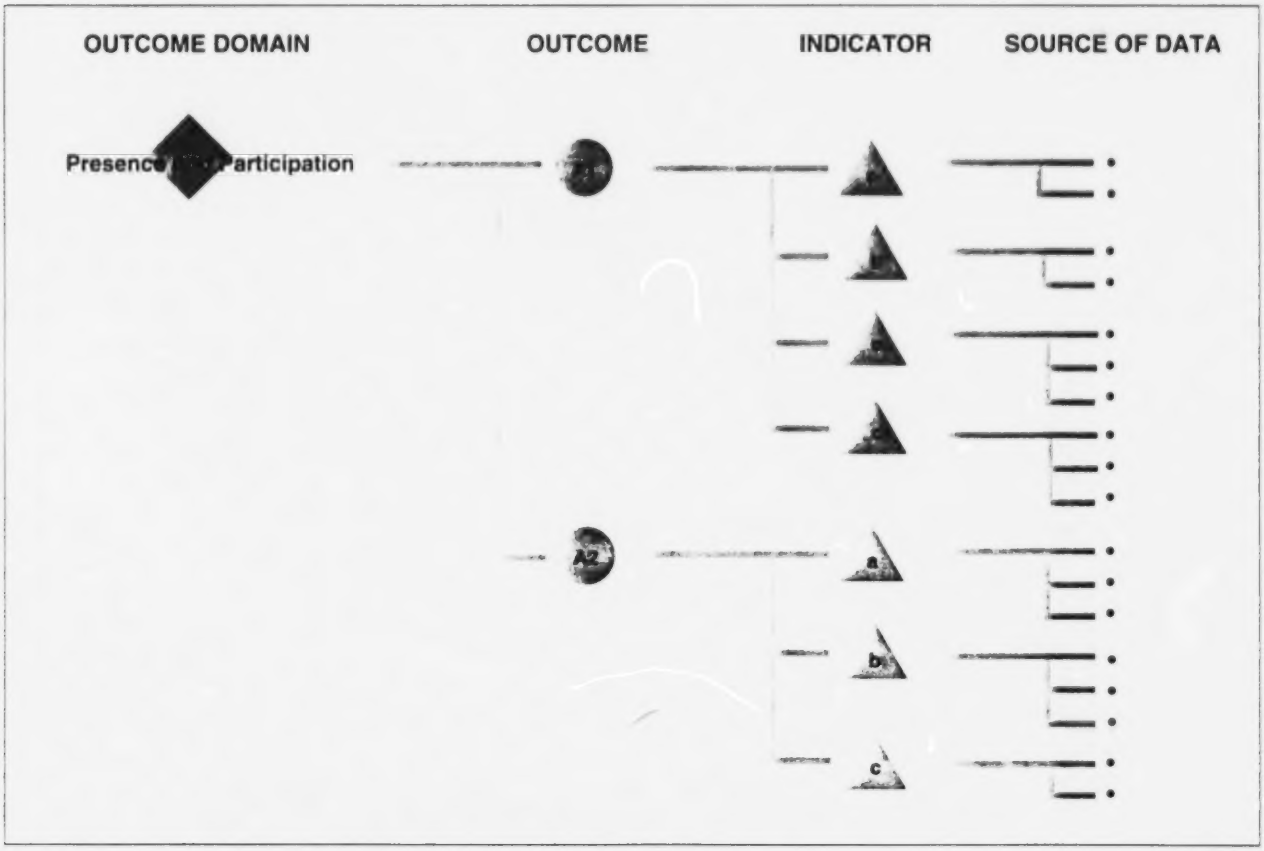
"Outcomes" are the results of learning experiences or interactions between children and the educational process.

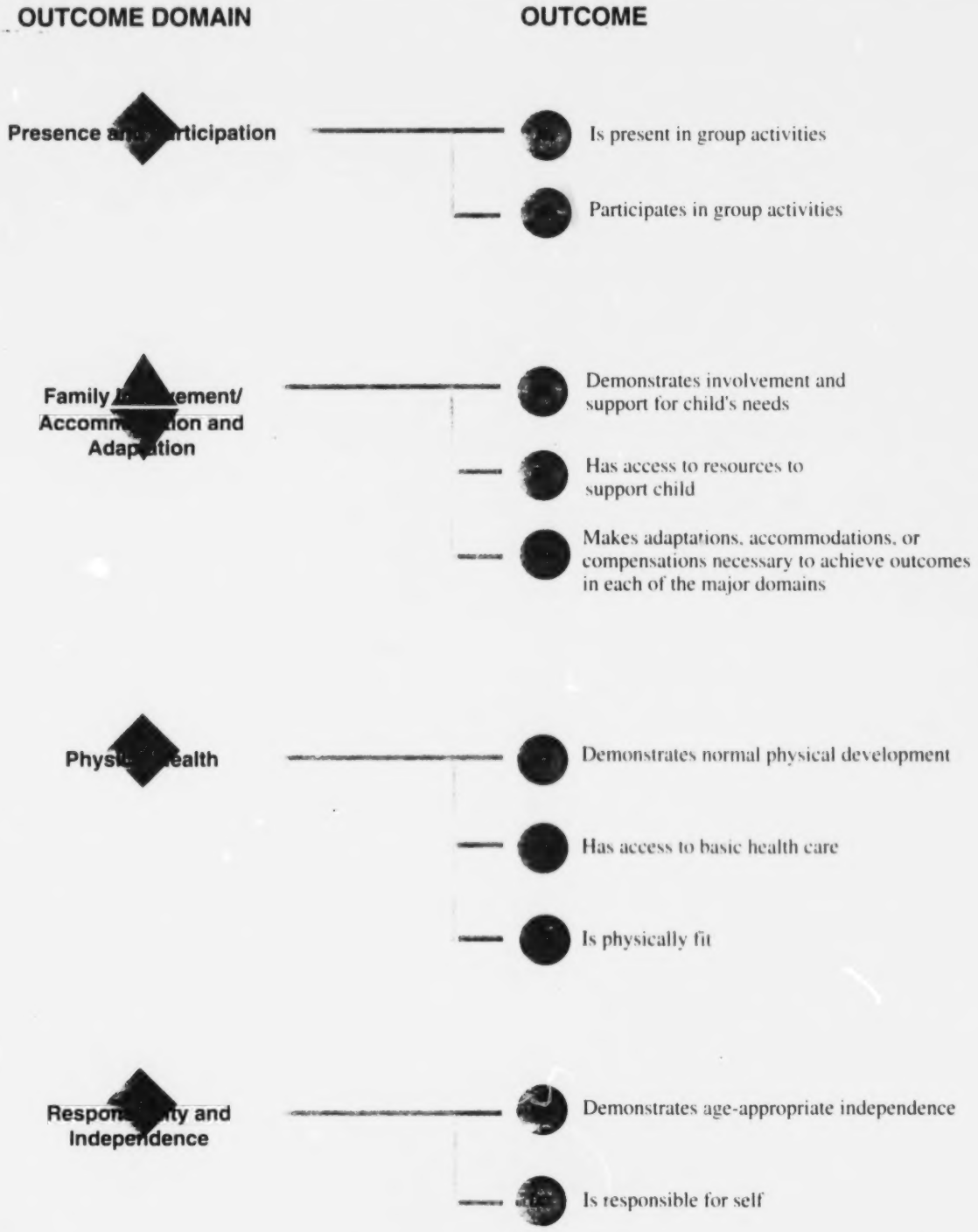
"Indicators" are numbers or other symbolic representations that can be used to determine whether desired outcomes are achieved.

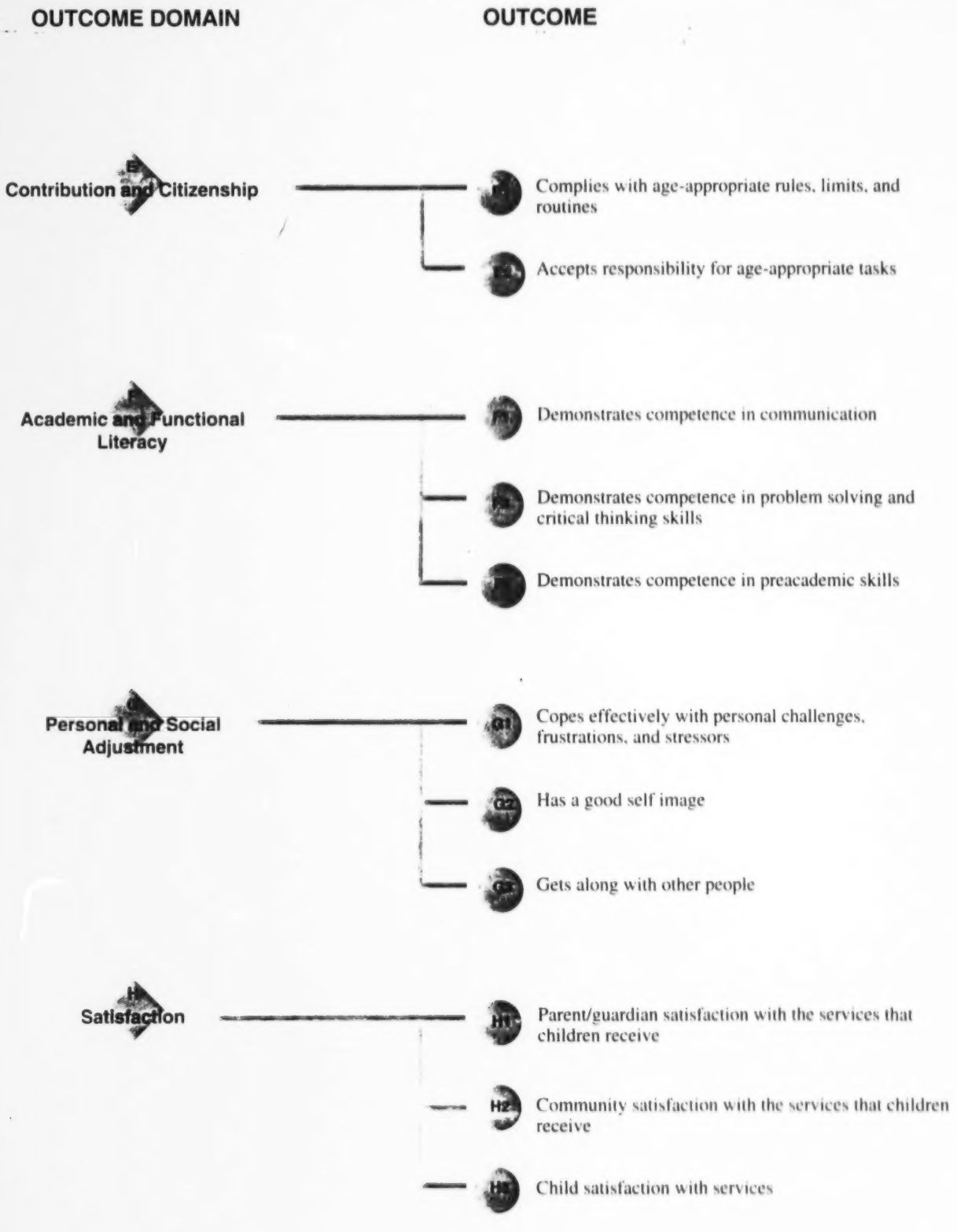
The relationships among these components are shown below for the Presence and Participation domain. Throughout this document outcome domains are represented by shaded diamonds, outcomes are represented by shaded circles, and indicators are represented by shaded triangles. Sources of data, represented below as small dots, are not fully developed for the eight domains in this document.

Outcomes for the eight domains are presented on pages 4 and 5. Indicators are listed for each outcome within outcome domains on pages 8-15. Sample sources of data for the Presence and Participation outcome domain are presented on page 17.

Within this document, outcome domains, outcomes, and indicators are assigned letters and numbers to help in referencing them. These letters and numbers do not imply a hierarchical order of any kind.




OUTCOME DOMAIN
OUTCOME
Presence and Participation
Is present in group activities
Participates in group activities
Family Involvement/ Accommodation and Adaptation
Demonstrates involvement and support for child's needs
Has access to resources to support child
Makes adaptations, accommodations, or compensations necessary to achieve outcomes in each of the major domains
Physical Health
Demonstrates normal physical development
Has access to basic health care
Is physically fit
Responsibility and Independence
Demonstrates age-appropriate independence
Is responsible for self


OUTCOME DOMAIN
OUTCOME
Contribution and Citizenship
Complies with age-appropriate rules, limits, and routines
Accepts responsibility for age-appropriate tasks
Academic and Functional Literacy
Demonstrates competence in communication
Demonstrates competence in problem solving and critical thinking skills
Demonstrates competence in preacademic skills
Personal and Social Adjustment
Copes effectively with personal challenges, frustrations, and stressors
Has a good self image
Gets along with other people
Satisfaction
Parent/guardian satisfaction with the services that children receive
Community satisfaction with the services that children receive
Child satisfaction with services

Possible Indicators for Age 3 Outcomes

Indicators are numbers or other symbolic representations of outcomes. They can be viewed over time to gather information on trends. At the national and state levels, indicators usually are presented as percentages or rates.

State and local district personnel who are interested in specific students can easily translate the indicators presented here into individually-based indicators. A guide to these translations is included in the supporting document entitled *Self-Study Guide to the Development of Educational Outcomes and Indicators* (see p. 25).

Lists of possible indicators for early childhood outcomes at age 3, which were identified through the consensus-building process, are presented on the following pages. It is important to think of these as a framework within which outcomes, indicators, and sources of data can be generated.

= OUTCOME = INDICATOR

Presence and Participation

A1 Is present in group activities

- Percent of children enrolled in early care and education programs (differentiated by type of program and enrollment of children with and without disabilities)
- Percent of children excluded or terminated from programs for typically developing children
- Absenteeism rate from day care, preschool, or other early childhood programs
- Percent of children who received early intervention services who no longer need special education services

A2 Participates in group activities

- Percent of children who participate in family activities
- Percent of children participating in the community with parents, siblings, or friends
- Percent of children enrolled in early care and education programs who are engaged in ongoing activities within those programs

= OUTCOME = INDICATOR

B DOMAIN

Family Involvement/ Accommodation and Adaptation

B1 Demonstrates involvement and support for child's needs

- a. Percent of families with appropriate support to meet their child's needs
- b. Percent of families providing environments supportive of their child's education and learning
- c. Percent of family members who attend or participate in school/community-based programs in which their child is enrolled
- d. Percent of children whose family system positively supports their development

B2 Has access to resources to support child

- a. Percent of families knowledgeable about community resources and programs needed by their child
- b. Percent of families who are connected to appropriate service providers/agencies
- c. Percent of families with adequate social and economic resources to appropriately parent children
- d. Percent of families with appropriate parenting skills to anticipate and meet developmental needs of children
- e. Percent of families living in safe environments (free of community and family violence, and substance abuse)

B3 Makes adaptations, accommodations, or compensations necessary to achieve outcomes in each of the major domains

- a. Percent of children needing adaptive devices or skills who use them to participate in activities in home, school, and community environments

● = **OUTCOME** ▲ = **INDICATOR**

Physical Health

● **Demonstrates normal physical development**

- ▲ Percent of children who are in expected range of growth and physical development
- ▲ Percent of children with appropriate nutrition (e.g., not obese or undernourished)
- ▲ Percent of children who have been abused or neglected
- ▲ Percent of children who have been accidentally poisoned or have had serious injuries that require medical attention

● **Has access to basic health care**

- ▲ Percent of children who have received age appropriate immunizations
- ▲ Percent of children who receive health care supervision including education, diagnosis, and treatment services
- ▲ Percent of children who have had a dental exam and appropriate treatment

● **Is physically fit**

- ▲ Percent of children who actively engage in developmentally appropriate large motor play activities

= OUTCOME = INDICATOR

Responsibility and Independence

Demonstrates age-appropriate independence

- Percent of children who initiate and follow through on activities
- Percent of children who separate easily from parents/guardians in familiar and comfortable situations
- Percent of children who can occupy themselves without continuous adult involvement

Is responsible for self

- Percent of children who can feed themselves with limited assistance
- Percent of children who use the toilet with limited assistance
- Percent of children who dress themselves with limited assistance

= OUTCOME = INDICATOR

Contribution and Citizenship

E1 **Complies with age-appropriate rules, limits, and routines**

- Percent of children who participate in simple routines in familiar environments
- Percent of children who follow simple rules/limits

E2 **Accepts responsibility for age-appropriate tasks**

- Percent of children who help with simple tasks in natural environments

= OUTCOME = INDICATOR

Academic and [illegible]ctional Literacy

F1 Demonstrates competence in communication

- Percent of children who comprehend and effectively use verbal and nonverbal communication skills for self-expression and interaction with others
- Percent of children who follow directions/respond to simple commands

F2 Demonstrates competence in problem-solving and critical-thinking skills

- Percent of children who demonstrate an understanding of cause and effect
- Percent of children who begin to participate in problem solving
- Percent of children who demonstrate curiosity, persistence, and exploratory behavior in play and age-appropriate activities

F3 Demonstrates competence in preacademic skills

- Percent of children who demonstrate an interest in books and listening to stories
- Percent of children who demonstrate an understanding of basic relational concepts
- Percent of children who begin to recognize that symbols/objects can be used to represent other objects and events
- Percent of children who participate in and enjoy the arts

● = OUTCOME ▲ = INDICATOR

Personal and [illegible]al Adjustment

● Copes effectively with personal challenges, frustrations, and stressors

- ▲ Percent of children who deal with frustration and unfavorable events in age-appropriate ways
- ▲ Percent of children who differentiate familiar from unfamiliar people, settings, and situations

● Has a good self image

- ▲ Percent of children who demonstrate a positive sense of self-worth
- ▲ Percent of children who perceive themselves as competent
- ▲ Percent of children who demonstrate an appropriate range of affect/emotions

● Gets along with other people

- ▲ Percent of children who initiate and respond to social contacts with other children
- ▲ Percent of children who engage in extended social interactions with other children
- ▲ Percent of children who engage in appropriate play with other children including parallel, associative, and emerging cooperative play skills
- ▲ Percent of children who initiate and respond to social contacts with adults
- ▲ Percent of children who appropriately express needs to other children and adults

17

● = OUTCOME ▲ = INDICATOR

Satisfaction

Parent/guardian satisfaction with the services that children receive

- ▲ Percent of parents/guardians who understand early childhood services* and rate them as effective, efficient, coordinated, and responsive in meeting *child* needs
- ▲ Percent of parents/guardians who understand early childhood services* and rate them as effective, efficient, coordinated, and responsive in meeting *family* needs
- ▲ Percent of parents/guardians who are satisfied with their own level of involvement in educational decision making (differentiated by individual, local, and state)

Community satisfaction with the services that children receive

- ▲ Percent of providers who are informed of and know how to use early childhood services* and rate them as effective, efficient, coordinated, and responsive in meeting *child* needs
- ▲ Percent of providers who are informed of and know how to use early childhood services* and rate them as effective, efficient, coordinated, and responsive in meeting *family* needs
- ▲ Percent of providers who are satisfied with their own level of involvement with service-related decision making and delivery of services
- ▲ Percent of community (policy makers, members of the business community, general public) who understand early childhood services* and rate them as effective, efficient, and coordinated in meeting *child* needs
- ▲ Percent of community (policy makers, members of the business community, general public) who understand early childhood services* and rate them as effective, efficient, and coordinated in meeting *family* needs

Child satisfaction with services

- ▲ Percent of children who enjoy their participation in early childhood settings

*Plans for early childhood services include goals, setting, procedures, and outcomes.

Steps Toward Identifying Sources of Data for Indicators

NCEO staff and advisors are currently in the process of identifying possible sources of data for each of the indicators that has been identified through the consensus-building process. Examples of possible sources of data for the seven indicators within the Presence and Participation domain are provided on this page. These were generated by NCEO staff. Before listing the possible sources of data for all outcome indicators in the NCEO model, experts will be asked to provide their ideas about the best data sources.

Presence a[illegible]articipation

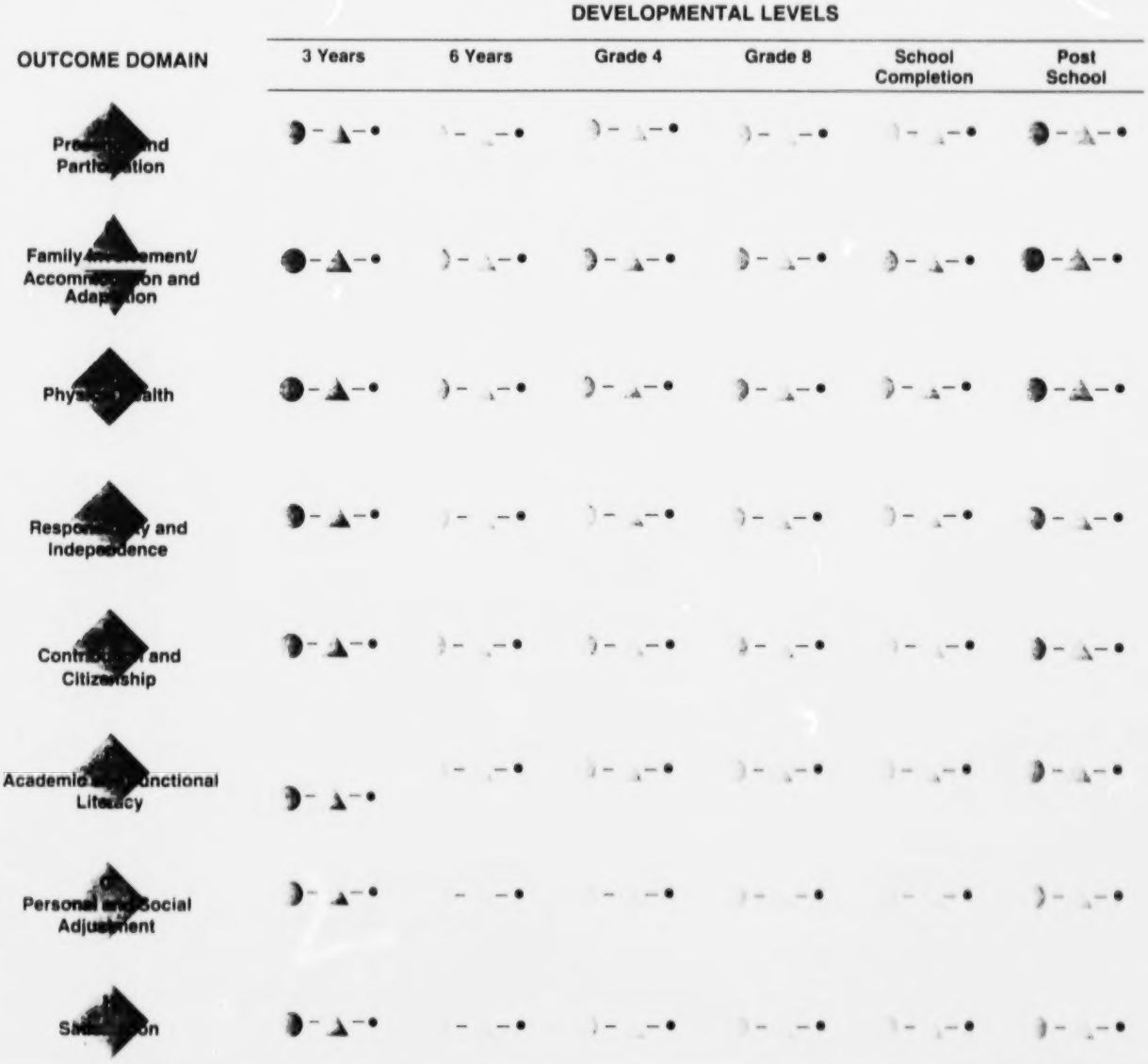
OUTCOME	INDICATOR	POSSIBLE SOURCE OF DATA
Is present in group activities	Percent of children enrolled in early care and education programs (differentiated by type of program and enrollment of children with and without disabilities)	• Early childhood program records
	Percent of children excluded from programs for typically developing children	• Parent interviews
	Absenteeism rate from day care, preschool, or other early childhood programs	• Early childhood program records • Parent interviews
	Percent of children who received early intervention services who no longer need special education services	• Child Count records • Family interviews
Participates in group activities	Percent of children who participate in family activities	• Staff ratings • Parent interviews
	Percent of children who participate in the community with parents, siblings, or friends	• Staff ratings • Parent interviews
	Percent of children enrolled in early care and education programs who are engaged in ongoing activities within those programs	• Staff ratings

Identifying and Defining the Important Outcomes of Education

The model and lists of domains, outcomes, and indicators that have been presented in this document are viewed as providing a framework and examples. From these examples, states, districts, and schools can begin to identify and define the important outcomes of education for all of their students.

This document is a summary of the results of consensus-building exercises focused on age 3 only. NCEO is using the same consensus-building process to identify outcomes and indicators for the developmental levels indicated in the figure below.

These will be available in the same format as the early childhood (age 3) outcomes and indicators. At the time of this publication, reports are available for age 6, school completion, and post school.



Contributors to the Development of Early Childhood Outcomes

Many individuals contributed to the development of the conceptual model, outcomes, and indicators presented here. Stakeholders participated in an intensive process of consensus building using a computerized multiattribute analysis procedure. Other contributors including NCEO's Advisory Committee members, read and reacted to various working papers, model prototypes, and questionnaires. With extreme gratitude we recognize and thank these contributors.

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Supporting Documents

The following documents are available for the reader who is interested in additional information on the model and its underlying assumptions, the process through which the current model and indicators were developed, or how states and school districts apply the model to meet their needs.

A Conceptual Model of Educational Outcomes for Children and Youth with Disabilities (Working Paper 1) July, 1991.

This paper discusses terminology and assumptions underlying the development of a model of outcomes for children and youth with disabilities. It presents alternative models, identifies unresolved issues, and represents a preliminary statement of models and issues.

Responses to Working Paper 1: Conceptual Model of Educational Outcomes for Children and Youth with Disabilities (Synthesis Report 3) June, 1992.

This paper is a synthesis of the responses from a large number of individuals who were invited to react to the educational outcomes model and the assumptions, definitions, and unresolved issues presented in Working Paper 1. Patterns in responses to specific issues including support, concerns, suggested refinements, and sample comments are included.

An Evolving Conceptual Model of Educational Outcomes for Children and Youth with Disabilities (Working Paper 2) August, 1992.

This paper is an extension of Working Paper 1, with revised definitions and assumptions, and an updated model of educational and enabling outcomes for students with disabilities. An initial list of indicators of each outcome domain is included.

Developing a Model of Educational Outcomes (September, 1993).

This paper summarizes the processes and stages leading to the development of NCEO's conceptual model, indicators, and sources of data.

Consensus Building: A Process for Developing Educational Outcomes and Indicators (in preparation).

This paper details the consensus process used by NCEO to produce lists of outcomes and indicators.

Self-Study Guide to the Development of Educational Outcomes and Indicators (September 1993).

This guide provides state and district personnel with information on how to use NCEO's model in developing a set of outcomes and indicators.

Information on these materials can be obtained by calling NCEO Publications (612-626-1530) or by writing:

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350 Elliott Hall
75 East River Road
Minneapolis, MN 55455

NCEO works in collaboration with
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